

**LPDES PERMIT NO. LA0045683, A1 No. 3165**

**LPDES FACT SHEET and RATIONALE**  
**FOR THE DRAFT REVOCATION AND REISSUANCE**  
**OF**  
**LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM**  
**(LPDES) PERMIT TO DISCHARGE TO WATERS OF LOUISIANA**

**I. Company/Facility Name:** Marathon Petroleum Company LLC - Louisiana Refining Division  
 Garyville Refinery  
 P.O. Box AC  
 Garyville, LA 70051

**II. Issuing Office:** Louisiana Department of Environmental Quality (LDEQ)  
 Office of Environmental Services  
 Post Office Box 4313  
 Baton Rouge, Louisiana 70821-4313

**III. Prepared By:** Jenniffer Sheppard  
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**Date Prepared:** December 23, 2007

**IV. Permit Action/Status:**

**A. Reason For Permit Action:**

Proposed revocation and reissuance of an existing Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term following regulations promulgated at LAC 33:IX.2711/40 CFR 122.46\*.

\* In order to ease the transition from NPDES to LPDES permits, dual regulatory references are provided where applicable. The LAC references are the legal references while the 40 CFR references are presented for informational purposes only. In most cases, LAC language is based on and is identical to the 40 CFR language. 40 CFR Parts 401, 405-415, and 417-471 have been adopted by reference at LAC 33:IX.4903 and will not have dual references. In addition, state standards (LAC 33:IX Chapter 11) will not have dual references.

LAC 33:IX Citations: Unless otherwise stated, citations to LAC 33:IX refer to promulgated regulations listed at Louisiana Administrative Code, Title 33, Part IX.

40 CFR Citations: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations in accordance with the dates specified at LAC 33:IX.4901, 4903, and 2301.F.

**B. NPDES permit -** NPDES permit effective date: N/A  
 NPDES permit expiration date: N/A  
 EPA has not retained enforcement authority.

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- C. LPDES permit - LPDES permit effective date: January 1, 2005  
 LPDES permit expiration date: December 31, 2009
- D. Application received on December 2, 2007. Additional information received via e-mail on December 7, 2007, December 10, 2007, January 17, 2008, February 1, 2008, March 28, 2008, and April 3, 2008. IT Questions and Responses were submitted as a separate document on December 27, 2008. Application addendum submitted on February 25, 2008.

**V. Facility Information:**

- A. Location - 4663 West Airline Highway in Garyville
- B. Applicant Activity -

According to the application, Marathon Petroleum Company LLC - Louisiana Refining Division (LRD), Garyville Refinery, is a fully integrated petroleum refinery which processes both foreign and domestic crude oils into a variety of products including: gasoline; kerosene; Nos. 1, 2, and 6 fuel oils; isobutane; propane; propylene; asphalt; sulphur and petroleum coke. Processes used in the production of these items are desalting, atmospheric distillation, vacuum distillation, catalytic cracking, hydrotreating, asphalt production, HF alkylation, reforming and delayed coking.

Marathon also accepts wastewater from Pinnacle Polymers Company for treatment and discharge. Pinnacle Polymers Company manufactures polypropylene from feedstock obtained from Marathon. Discharges from Pinnacle Polymers are regulated under OCPSF point source guidelines.

In addition, Marathon has proposed a major expansion (Garyville Major Expansion [GME] Project) that is currently underway. This expansion will increase the crude oil refining capacity an additional 185,000 barrels per day. A list of new and affected existing units can be found in the LPDES permit application dated November 30, 2007, Section 3, Table 3-1 (See EDMS Document ID 36444071). As a result of the GME, Marathon has requested a revocation and reissuance of their existing LPDES permit.

In keeping with Marathon's commitment to the environment, as evidenced by its 2002 induction into EPA's National Environmental Performance Track and its charter membership in LDEQ's Louisiana Environmental Leadership Program, Marathon has requested retention of their Internal Outfall 101 permit limits from the 2005 LPDES permit.

While Marathon has committed to retention of Internal Outfall 101 limitations at the level they were permitted for in the 2005 LPDES permit (255,000 bbl/day), this approach did not take into account the reduced contribution from Pinnacle's OCPSF discharge (the point of compliance for the conventional and non-conventional parameters is at Internal Outfall 101). Based on the decrease in Pinnacle's allocation, and keeping with the intent of retaining limitations at Internal Outfall 101, LDEQ has determined that it is more appropriate to establish limitations based on current facility operation of 275,000 bbl/day (**Pre-GME**, using BCT and BAT technologies for the existing process units), the reduced contribution from Pinnacle, and a minimal contribution from the GME project (**Post-GME**, using New Source Performance Standards [NSPS] for the new units). This approach yields no significant net increase in permit limitations at Internal Outfall 101.

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In support of the commitment to operate under the existing 2005 LPDES limitations, Marathon has also proposed to install a fifth wastewater treatment train consisting of an Advent Integrated System (AIS) that utilizes an air lift Biological Reactor (with anoxic zone and aerobic zone) and an Integral Clarifier. The existing Wastewater Treatment Plant (WWTP) consists of 3 parallel conventional activated sludge units and one AIS. Based upon estimated volumes from the GME Project, Marathon estimates that the combined refinery (existing plus GME units) will require the capacity to process approximately 3,600 gallons per minute (GPM) of WWTP influent. The expanded WWTP will be able to process approximately 4,000 GPM, providing excess capacity for preventative maintenance. It is noted that although not required, the two AIS trains will treat about 67% of the refining wastewater and remove between 85-90% of dissolved nitrates produced by the biological oxidation of ammonia, substantially reducing nutrient loading to the Mississippi River.

The GME will also add a new dock at Marathon which will include a new river water intake structure. See 316(b) discussion below for a write up on new and existing intake structures.

C. CWA 316(b) Discussion:

Section 316(b) of the Clean Water Act (CWA) states "Any standard established pursuant to section [301 or section 306 of this Act] and applicable to a point source shall require that the location, design, construction, and capacity of cooling water intake structures reflect the best technology available for minimizing adverse environmental impact." Information submitted in the application indicates that the facility withdraws surface water for cooling purposes and is not subject to subpart I (for New Facilities). Marathon utilizes cooling towers to minimize environmental impact to the supply water stream. Additionally, the following technologies have been or are to be installed to minimize adverse environmental impacts:

Existing Structure

For Marathon's existing refinery water intakes, there are three (3) raw water pumps that are rated at 2,950 gallons per minute each (for a total design capacity of just over 12.7 million gallons per day). They currently pump a little under half of this per day - averaging about 6.2 million gallons per day for all three pumps combined. Marathon typically runs two (2) out of the three (3) pumps at any given time. Reasons for additional water having to be brought into the refinery would be if there was a boiler house request for additional water or during a fire situation.

Two (2) of these pumps are located on Dock 1, with the 3rd pump located on Dock 2. Each water intake is 15 inches in diameter, and has a 3/16 inch stainless steel grating cover to keep debris out, with the capability of being flushed to clear the grating as needed. The pumps are located just inside the Dock structures, minimum depth of 6 to 8 feet below surface (normal pool stage).

New Intake Structure

The GME Project is neither a Greenfield nor a stand-alone facility since it is being constructed contiguously with the existing refinery; the existing refinery and the GME Project will be highly interconnected / integrated with each other.

Two (2) new raw water pumps will be located at Dock 5, which will be constructed a little further out in the Mississippi River than the existing Dock 3.

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These pumps will operate similarly to the existing raw water pumps in that one will run all the time with the other being a backup. The design capacity of each pump will be 5,940 gallons per minute, which converts to a total of approximately 17.1 million gallons per day. Marathon proposes to pull approximately 4.5 million gallons per day into the refinery on any given day.

The intake lines will be located about 5 to 10 feet below surface of the river (based on the river water level). The diameter of the pipe at the pump will be approximately 16 inches; however the intake has a 30 inch connection into the wedgewire screen pipe housing.

In the LPDES permit application, Marathon also indicated plans to install wedgewire cylindrical screen on the new river water intake structure to reduce mortality levels of aquatic organisms such as fish, shellfish or their eggs.

- a. Technology Basis - (40 CFR Chapter 1, Subchapter N/Parts 401, 405-415, and 417-471 have been adopted by reference at LAC 33:IX.4903)

| <u>Guideline</u>   | <u>Reference</u>               |
|--|--------------------------------|
| Organic Chemicals, Plastics,<br>and Synthetic Fibers<br>Process Flow - 0.128 | 40 CFR 414<br>Subparts D and J |
| Refinery Guidelines  | 40 CFR 419<br>Subpart B        |

Treated effluent from the Garyville Major Expansion (GME) operations is subject to New Source Performance Standard (NSPS) effluent limitation guidelines at 40 CFR 419, Subpart B.

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|  | <b>Current Operations<br/>Pre-GME,<br/>275,000 bbl/day</b> | <b>Proposed New<br/>Operations -NSPS<br/>Post-GME,<br/>185,000 bbl/day</b> | <b>Total Proposed<br/>Operations<br/>Post-GME,<br/>460,000 bbl/day</b> |
|--|--|--|--|
| Feedstock rate to Topping Unit(s)                | 275  | 185  | 460  |
|  |  |  |  |
| Process Unit Rates:                              |  |  |  |
| Vacuum Crude Distillation                        | 134  | 96.3   | 230.3  |
| Crude Desalting                                  | 275  | 185  | 460  |
| Atmospheric Crude Distillation                   | 275  | 185  | 460  |
| Hydrotreating                                    | 380  | 87   | 467  |
| Hydrocracking                                    | 0  | 70   | 70   |
| Fluid Catalytic Cracking                         | 131  | 0  | 131  |
| Delayed Coking                                   | 40   | 44   | 84   |
| Asphalt Production                               | 26   | 0  | 26   |
| Catalytic Reforming                              | 48.5   | 65   | 113.5  |
|  |  |  |  |
| Ballast Water Flow, K gal/day                    | 72   | 53   | 125  |
| Marathon Contaminated Stormwater Flow, K gal/day | 322  | 219  | 541  |

Pinnacle Stormwater flow, based on flow from application, 1000 gal/day: 43

Other sources of technology based limits:

LDEQ Stormwater Guidance, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6).

Hydrostatic Test General Permit (LAG670000)

Best Professional Judgment

D. Fee Rate -

1. Fee Rating Facility Type: major
2. Complexity Type: V
3. Wastewater Type: II
4. SIC code: 2911 and 2821

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E. Continuous Facility Effluent Flow -  
     Pre-GME       3.371 MGD  
     Post-GME      6.104 MGD

**VI. Receiving Waters:** Mississippi River (Outfall 001) and the Lake Maurepas Drainage System (Union Canal, thence to Mississippi Bayou, thence to Dutch Bayou, thence to Lake Maurepas) for Outfalls 002, 003, 004, 04A, 04B, 005, 006, 007, 07A, 008, 08A, 08B, 009, 011, 012, and 013.

Lake Maurepas Drainage System (Union Canal, thence to Mississippi Bayou, thence to Dutch Bayou, thence to Lake Maurepas) applicable to Outfalls 002, 003, 004, 04A, 04B, 005, 006, 007, 07A, 008, 08A, 08B, 009, 011, 012, and 013

1. River Basin: Lake Pontchartrain, Segment No. 040602
2. Designated Uses:

The designated uses are primary contact recreation, secondary contact recreation, and fish and wildlife propagation.

Mississippi River (Outfall 001)

1. TSS (15%), mg/L: 26.6
2. Average Hardness, mg/L CaCO<sub>3</sub>: 149.7
3. Critical Flow, cfs: 141,955
4. Mixing Zone Fraction: 0.3333
5. Harmonic Mean Flow, cfs: 366,748
6. River Basin: Mississippi River, Segment No. 070301
7. Designated Uses:

The designated uses are primary contact recreation, secondary contact recreation, fish and wildlife propagation, and drinking water supply.

Information based on the following: Water Quality Management Plan; LAC 33:IX Chapter 11;/Recommendation(s) from the Engineering Section. Hardness and 15% TSS data come from the ambient monitoring station #321 on the Mississippi River at Lucher ferry landing south of Lucher, Louisiana and listed in Hardness and TSS Data for All LDEQ Ambient Stations for the Period of Record as of March 1998, LeBlanc. This information was included in a memorandum from Will Barlett to Jenniffer Sheppard, dated December 7, 2007 (See Appendix C).

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**VII. Outfall Information:**

Outfall 001 (Pre-GME)

- A. Type of wastewater - the discharge of treated process wastewater and process area stormwater to the Mississippi River. It is comprised of the combined effluents from Internal Outfalls 101 (WWTP effluent), 201 (river water clarifier underflow from the existing refinery), and 301 via Internal Outfall 101 (utility wastewaters, process area stormwater, and effluents from the neighboring facility, Pinnacle).
- B. Location - at the point of discharge from the effluent discharge line after mixing of the effluents from Internal Outfalls 101, 201, and 301, prior to discharging to the Mississippi River, at Latitude 30°03'05", Longitude 90°35'28".
- C. Treatment - None, see Internal Outfalls.
- D. Flow - Continuous Flow 3.371 MGD.
  - \* Specific component waste streams are defined at the Internal Outfall descriptions and in Appendices A-1 and A-6.
- E. Receiving waters - Mississippi River.
- F. Basin and segment - Mississippi River Basin, Segment 070301.

Outfall 001 (Post-GME)

- A. Type of wastewater - the discharge of treated process wastewater and process area stormwater to the Mississippi River. It is comprised of the combined effluents from Internal Outfalls 101 (WWTP effluent), 201 (river water clarifier underflow from the existing refinery), 301 via Internal Outfall 101 (utility wastewaters, process area stormwater, and effluents from the neighboring facility, Pinnacle), and 401 (river water clarifier underflow from the GME project).
- B. Location - at the point of discharge from the effluent discharge line after mixing of the effluents from Internal Outfalls 101, 201, 301, and 401, prior to discharging to the Mississippi River, at Latitude 30°03'05", Longitude 90°35'28".
- C. Treatment - None, see Internal Outfalls.
- D. Flow - Continuous Flow 6.104 MGD.
  - \* Specific component waste streams are defined at the Internal Outfall descriptions and in Appendices A-2, A-4, and A-6.
- E. Receiving waters - Mississippi River.
- F. Basin and segment - Mississippi River Basin, Segment 070301.

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Internal Outfall 101 (Pre-GME and Post-GME)

- A. Type of wastewater - the discharge of treated effluent from the WWTP commingled with the treated effluent from the FCCU Scrubber Pond. WWTP influent includes: process wastewater, process area and marine dock stormwater runoff, spent caustic, treated sanitary wastewater, boiler regeneration wastewater, boiler blowdown, ballast water, laboratory wastewater, cooling tower blowdown, fire training water, adjacent MPC distribution terminal air-stripped wastewater/stormwater, miscellaneous de minimus wastewaters (i.e. hydrostatic test wastewaters, air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water), and effluent from Internal Outfall 301.
- B. Location - at the point of discharge from the final settling pond at the wastewater treatment facility, prior to combining with the effluent from Internal Outfalls 201, 401 (Post GME only), and Final Outfall 001, at Latitude 30°03'35", Longitude 90°35'55".
- C. Treatment - treatment of process wastewaters (wastewater treatment plant) consists of:
  - flocculation
  - sedimentation
  - flotation
  - mixing
  - chemical precipitation
  - coagulation
  - activated sludge
  - nitrification-denitrification
  - stabilization ponds
  - aerobic digestion
  - chemical conditioning

Desalter Water:

- benzene flash column
- wastewater treatment plant

Sour Water:

- sour water strippers
- routed to desalters or the wastewater treatment plant

Crude Dewatering, Ballast Water, and Tank Water Draws:

- benzene stripper or sour water strippers for removal of H<sub>2</sub>S and NH<sub>3</sub>
- routed to crude desalters, then excess stripped water is routed to wastewater treatment plant

FCCU Flue Gas Scrubber Pond Wastewater:

- sedimentation/settling
- neutralization
- aerated lagoon
- wastewater treatment plant if necessary



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D. Flow - Continuous Flow

Pre-GME 3.019 MGD  
Post-GME 5.492 MGD

| Types of Wastewater                           | Pre-GME Rate, MGD | Post-GME Rate, MGD |
|---|-------------------|--------------------|
| Process Wastewater                            | 1.586             | 3.230              |
| Process Area Stormwater                       | 0.322             | 0.541              |
| Utility Wastewater:<br>Cooling Tower Blowdown | 0.528             | 0.919              |
| Regeneration Wastewater                       | 0.163             | 0.284              |
| Sanitary Wastewater                           | 0.164             | 0.285              |
| Laboratory Wastewater                         | 0.016             | 0.028              |
| Wastewater from Outfall 301                   | 0.128             | 0.128              |
| Fire Training Water                           | 0.007             | 0.012              |
| FCCU Flue Gas Scrubber Pond<br>Wastewater     | 0.159             | 0.159              |
| Offsite-Terminal-Wastewater and<br>stormwater | <0.0005 MGD       | <0.0005 MGD        |
| Centrifuge and Thermal<br>Desorption          | 0.019             | 0.033              |
| Centrifuge and Thermal<br>Desorption          | -0.020            | -0.035             |
| Atmospheric Losses                            | -0.053            | -0.092             |
| TOTAL FLOW                                    | 3.019             | 5.492              |

\* Specific component waste streams are defined at Appendix A-1, A-2, A-4, and A-6.

E. Receiving waters - Mississippi River via Final Outfall 001.

F. Basin and segment - Mississippi River Basin, Segment 070301.

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Internal Outfall 201 (Pre-GME and Post-GME)

- A. Type of wastewater - the discharge through Final Outfall 001 of the underflow stream from the existing refinery's raw river water intake clarification system.
- B. Location - at the point of discharge of the underflow from the raw river water intake clarifier prior to combining with the waters of Final Outfall 001, at Latitude 30°03'45", Longitude 90°35'45".
- C. Treatment - None
- D. Flow - Continuous Flow, 0.352 MGD.
- E. Receiving waters - Mississippi River via Final Outfall 001.
- F. Basin and segment - Mississippi River Basin, Segment 070301.

Internal Outfall 301 (Pre-GME and Post-GME)

- A. Type of wastewater - the discharge of washdown water, cooling tower blowdown, process area stormwater, and treated sanitary wastewater from Pinnacle. Also included are Pinnacle's miscellaneous de minimus wastewaters (i.e. hydrostatic test wastewaters, air conditioning condensate, steam trap condensate, eye wash and safety shower station water, fire water, and utility water used for general facility washdown water, irrigation water, and dust control water as needed).
- B. Location - at the point of discharge from the polypropylene facility, prior to entering the refinery wastewater treatment plant, at Latitude 30°04'07", Longitude 90°36'15".
- C. Treatment - treatment of Pinnacle wastewaters consists of:
  - ammonia stripping
  - distillation
  - flocculation
  - sedimentation
  - flotation
  - gas phase separation
  - mixing
  - chemical precipitation
  - coagulation
  - activated sludge
  - nitrification-denitrification
  - stabilization ponds
  - aerobic digestion
  - chemical conditioning
- D. Flow - Continuous, (Max 30-Day) 0.127809 MGD.
- E. Receiving waters - Internal Outfall 101, thence to the Mississippi River via Final Outfall 001.
- F. Basin and segment - Mississippi River Basin, Segment 070301.

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Internal Outfall 401 (new outfall proposed to discharge Post-GME)

- A. Type of wastewater - the discharge through Final Outfall 001 of the underflow stream from the new raw river water intake clarification system from the Post-GME Project.
- B. Location - at the point of discharge of the underflow from the raw river water intake clarifier prior to combining with the waters of Final Outfall 001, at Latitude 30°03'53", Longitude 90°35'21".
- C. Treatment - None
- D. Flow - Continuous Flow, 0.260 MGD.
- E. Receiving waters - Mississippi River via Final Outfall 001.
- F. Basin and segment - Mississippi River Basin, Segment 070301.

Outfall 002 (Pre-GME and Post-GME)

- A. Type of wastewater - the discharge of non-process area stormwater runoff from the entire tank farm (except two refrigerated butane storage tanks [RBS]) including the diked secondary containment areas, the stormwater and underdrain groundwater from the certified closed land treatment area, the sandblasting and painting area located to the west of the certified closed land treatment area, material transfer areas other than the docks, stormwater that falls within close proximity to the paved, curbed process areas such as roadways, ditches, grassy areas, and gravel/aggregate surfaced areas, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously monitored hydrostatic test wastewater from Internal Outfall 011.
- B. Location - at the point of discharge from the oil baffle pond and trap prior to mixing with any other wastewaters, at Latitude 30°04'15", Longitude 90°36'05".
- C. Treatment - treatment of combined stormwater and utility wastewaters consists of:
  - baffle pond
  - oil trap
- D. Flow - Intermittent.
- E. Receiving waters - Lake Maurepas Drainage System (Union Canal, thence to Mississippi Bayou, thence to Dutch Bayou, thence to Lake Maurepas).
- F. Basin and segment - Lake Pontchartrain Basin, Segment 040602.

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Outfall 003 (Pre-GME and Post-GME)

- A. Type of wastewater - the discharge of non-process area stormwater runoff from Marathon Avenue, the refinery warehouse area, contractor laydown area, and employee and contractor parking areas, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously monitored hydrostatic test wastewater from Internal Outfall 011.
- B. Location -at the point of discharge from the northeast corner of the parking area prior to entering the Marathon Avenue Ditch and prior to mixing with any other wastewaters, at Latitude 30°04'10", Longitude 90°35'43".
- C. Treatment - None.
- D. Flow - Intermittent.
- E. Receiving waters - Lake Maurepas Drainage System (Union Canal, thence to Mississippi Bayou, thence to Dutch Bayou, thence to Lake Maurepas).
- F. Basin and segment - Lake Pontchartrain Basin, Segment 040602.

Outfalls 004, 04A, and 04B (Pre-GME and Post-GME)

- A. Type of wastewater - the discharge of nonprocess area stormwater runoff from contractor laydown area and contractor parking areas, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.
- B. Location - at the point of discharge from the northeastern-most side of the contractor laydown area prior to combining with other wastewaters, east of Outfall 004, at Latitude 30°04'14", Longitude 90°35'57". Samples taken at Outfall 004 will be representative of the discharges from Outfall(s) 04A (Latitude 30°04'14", Longitude 90°35'59") and 04B (Latitude 30°04'14", Longitude 90°36'00") .
- C. Treatment - None.
- D. Flow - Intermittent.
- E. Receiving waters - Lake Maurepas Drainage System (Union Canal, thence to Mississippi Bayou, thence to Dutch Bayou, thence to Lake Maurepas).
- F. Basin and segment -Lake Pontchartrain Basin, Segment 040602.

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Outfalls 005 and 006 (Pre-GME and Post-GME)

- A. Type of wastewater - the discharge of nonprocess area stormwater runoff from contractor laydown area and contractor parking areas, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.
- B. Location - at the point of discharge from the northwestern side of the contractor laydown area prior to combining with any other wastewaters, at Latitude 30°04'15", Longitude 90°36'02". Samples taken at Outfall 005 will be representative of the discharges from Outfall 006 (Latitude 30°04'15", Longitude 90°36'09").
- C. Treatment - None.
- D. Flow - Intermittent.
- E. Receiving waters - Lake Maurepas Drainage System (Union Canal, thence to Mississippi Bayou, thence to Dutch Bayou, thence to Lake Maurepas).
- F. Basin and segment -Lake Pontchartrain Basin, Segment 040602.

Outfall 007 (Pre-GME)

- A. Type of wastewater - the discharge of nonprocess area stormwater runoff from the western-most RBS tank diked containment area and the secondary containment around the bulk non-hazardous waste storage area, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.
- B. Location - at the point of discharge from the northwest corner of the western-most refrigerated butane tank diked containment area prior to combining with any other wastewaters, at Latitude 30°04'02", Longitude 90°36'31". Samples taken at Outfall 007 will be representative of the discharges from Outfall 07A.
- C. Treatment - None.
- D. Flow - Intermittent.
- E. Receiving waters - Lake Maurepas Drainage System (Union Canal, thence to Mississippi Bayou, thence to Dutch Bayou, thence to Lake Maurepas).
- F. Basin and segment -Lake Pontchartrain Basin, Segment 040602.

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Outfall 007 (Post-GME)

- A. Type of wastewater - the discharge of nonprocess area stormwater runoff from the western-most RBS tank diked containment area, the secondary containment around the bulk non-hazardous waste storage area south of the RBS, former Outfall 07A which includes stormwater runoff from the eastern-most RBS tank diked containment area, and former Outfall 08B which includes nonprocess area stormwater runoff from the shell aggregate service road and containment dike outslope and grassed area west of the solid waste transfer area; miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water); and previously tested hydrostatic test discharges from Internal Outfall 011.
- B. Location - at the point of discharge from the northwest corner of the western-most refrigerated butane tank diked containment area prior to combining with any other wastewaters, at Latitude 30°04'02", Longitude 90°36'31".
- C. Treatment - None.
- D. Flow - Intermittent.
- E. Receiving waters - Lake Maurepas Drainage System (Union Canal, thence to Mississippi Bayou, thence to Dutch Bayou, thence to Lake Maurepas).
- F. Basin and segment -Lake Pontchartrain Basin, Segment 040602.

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Outfall 07A (Pre-GME only, this Outfall is proposed for deletion Post-GME)

- A. Type of wastewater - the discharge of nonprocess area stormwater runoff from the eastern-most RBS tank diked containment area, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.
- B. Location - at the point of discharge from the northwest corner of the western-most refrigerated butane tank diked containment area prior to combining with any other wastewaters, at Latitude 30°04'02", Longitude 90°36'31". Samples taken at Outfall 007 will be representative of the discharges from Outfall 07A.
- C. Treatment - None.
- D. Flow - Intermittent.
- E. Receiving waters - Lake Maurepas Drainage System (Union Canal, thence to Mississippi Bayou, thence to Dutch Bayou, thence to Lake Maurepas).
- F. Basin and segment -Lake Pontchartrain Basin, Segment 040602.

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Outfalls 008 and 08A (Pre-GME and Post-GME)

- A. Type of wastewater - the discharge of nonprocess area stormwater runoff from the shell aggregate service road and containment dike outslope and grassed area west of the solid waste transfer area, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.
- B. Location - at the point of discharge from the southwest corner of the grassy area west of the non-hazardous waste drum storage area and southwest of the RBS tanks prior to combining with any other wastewaters, at Latitude 30°03'50", Longitude 90°36'31". Samples taken at Outfall 008 will be representative of the discharges from Outfall 08A.
- C. Treatment - None.
- D. Flow - Intermittent.
- E. Receiving waters - Lake Maurepas Drainage System (Union Canal, thence to Mississippi Bayou, thence to Dutch Bayou, thence to Lake Maurepas).
- F. Basin and segment - Lake Pontchartrain Basin, Segment 040602.

Outfall 08B (Pre-GME only, this Outfall is proposed for deletion Post-GME)

- A. Type of wastewater - the discharge of nonprocess area stormwater runoff from the shell aggregate service road and containment dike outslope and grassed area west of the solid waste transfer area, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.
- B. Location - at the point of discharge from the southwest corner of the grassy area west of the non-hazardous waste drum storage area and southwest of the RBS tanks prior to combining with any other wastewaters, at Latitude 30°03'50", Longitude 90°36'31". Samples taken at Outfall 008 will be representative of the discharges from Outfall 08B.
- C. Treatment - None.
- D. Flow - Intermittent.
- E. Receiving waters - Lake Maurepas Drainage System (Union Canal, thence to Mississippi Bayou, thence to Dutch Bayou, thence to Lake Maurepas).
- F. Basin and segment - Lake Pontchartrain Basin, Segment 040602.

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Outfall 009 (Pre and Post-GME)

- A. Type of wastewater - the discharge of non-process area stormwater runoff from the coker conveyor belt area and the contractor laydown areas located on the western side of the refinery's main tank farm, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.
- B. Location -at the point of discharge from the northwestern corner of the 318 tank dike, prior to combining with any other wastewaters, at Latitude 30°03'29", Longitude 90°36'27".
- C. Treatment - None.
- D. Flow - Intermittent.
- E. Receiving waters - Lake Maurepas Drainage System (Union Canal, thence to Mississippi Bayou, thence to Dutch Bayou, thence to Lake Maurepas).
- F. Basin and segment - Lake Pontchartrain Basin, Segment 040602.

Outfall 011 (Pre-GME and Post-GME)

- A. Type of wastewater - hydrostatic test wastewater.
- B. Location - at the point of discharge from the holding tank and/or vessel or pipeline being tested prior to combining with any other wastewaters, at Latitude 30°04'15", Longitude 90°36'09".
- C. Treatment - baffle pond with an oil trap at Outfalls 002 and 012. None at Outfalls 003-010 and 013.
- D. Flow - Intermittent.
- E. Receiving waters - Lake Maurepas Drainage System (Union Canal, thence to Mississippi Bayou, thence to Dutch Bayou, thence to Lake Maurepas).  
  
Can be discharged through any Final Outfall (002, 003, 004, 04A, 04B, 005, 006, 007, 07A, 008, 08A, 08B, 009, 012, and/or 013).
- F. Basin and segment - Lake Pontchartrain Basin, Segment No. 040602.



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Outfall 012 (new outfall proposed to discharge Post-GME)

- A. Type of wastewater - the discharge of nonprocess area stormwater runoff that falls within close proximity to the paved, curbed process areas such as roadways, ditches, grassy areas, gravel/aggregate surfaced areas associated with the GME Project on the east side of Marathon Avenue, the shell aggregate service road on the eastern side of the refinery's main tank farm (formerly Outfall 010), miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.
- B. Location -at the point of discharge of the new baffle pond, just south of the KCS Railroad tracks, on the east side of Marathon Avenue, prior to combining with any other wastewaters, at Latitude 30°04'09", Longitude 90°35'41".
- C. Treatment -treatment of combined stormwater and utility wastewaters consists of:
  - baffle pond
  - oil trap
- D. Flow - Intermittent.
- E. Receiving waters - Lake Maurepas Drainage System (Union Canal, thence to Mississippi Bayou, thence to Dutch Bayou, thence to Lake Maurepas).
- F. Basin and segment - Lake Pontchartrain Basin, Segment 040602.

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Outfall 013 (new outfall proposed to discharge Post-GME)

- A. Type of wastewater - the discharge of non-process area stormwater runoff from the future employee parking area on the east side of the GME, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.
- B. Location - at the point of discharge from the Northeast corner of the GME expansion property, prior to combining with any other wastewaters, at Latitude 30°04'14", Longitude 90°35'01".
- C. Treatment - None.
- D. Flow - Intermittent.
- E. Receiving waters - Lake Maurepas Drainage System (Union Canal, thence to Mississippi Bayou, thence to Dutch Bayou, thence to Lake Maurepas).
- F. Basin and segment - Lake Pontchartrain Basin, Segment 040602.

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#### **VIII. Proposed Permit Limits:**

The specific effluent limitations and/or conditions will be found in the draft permit. Development and calculation of permit limits are detailed in the Permit Limit Rationale section below.

Summary of Proposed Changes From the Current LPDES Permit:

- A. Outfall 101 (Pre and Post GME) - pH limitations of 6.0 to 9.0 (standard units) have been applied to this outfall in accordance with LAC 33:IX.1113.C.1.
- B. Internal Outfall 101 (Pre-GME) - limitations have been established based on current facility operation of 275,000 bbl/day (using BCT and BAT technologies for the existing process units), and the reduced contribution from Pinnacle (OCPSF Guideline Contribution).
- C. Internal Outfall 101 (Post-GME) - limitations have been established based on current facility operation of 275,000 bbl/day (using BCT and BAT technologies for the existing process units), the reduced contribution from Pinnacle, and a minimal contribution from the GME project (using New Source Performance Standards [NSPS] for the new units). This approach yields no significant net increase of permit limitations from those established in the 2005 LPDES permit.
- D. Internal Outfall 301 - limitations have decreased due to a flow decrease from 0.301 MGD to 0.128 MGD. Limitations have been calculated in accordance with the OCPSF Guidelines at 40 CFR 414, Subparts D and J.
- E. Internal Outfall 401 - newly created outfall to monitor underflow stream from the new raw river water intake clarification system from the Post-GME Project. A report only requirement has been established for flow. Marathon shall also retain an inventory of coagulants used in this outfall, per Part III.C.3 of the permit. These requirements are similar to those previously established at Internal Outfall 201. Requirements for this outfall shall become effective upon start up of discharge.
- F. Outfall 007 (Post-GME) - discharges from former Outfalls 07A and 08B will be re-directed through this outfall.
- G. Outfall 07A - this outfall is proposed for deletion as part of the GME Project. The discharges are proposed to be re-directed to Outfall 007 (Post-GME). Marathon shall notify the Office of Environmental Services and Office of Environmental Compliance in writing thirty days prior to deletion of this outfall.
- H. Outfall 08B - this outfall is proposed for deletion as part of the GME Project. The discharges are proposed to be re-directed to Outfall 007 (Post-GME). Marathon shall notify the Office of Environmental Services and Office of Environmental Compliance in writing thirty days prior to deletion of this outfall.
- I. Outfall 009 - stormwater from sandblasting and painting areas, previously discharged through this outfall, are now routed through Outfall 002 such that it passes through the baffle pond and oil trap.
- J. Outfall 010 - this outfall has been deleted.

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- K. Outfalls 012 and 013 - newly created outfalls to monitor various areas of non-process area stormwater runoff, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water such as facility wash down water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011. The following limitations were established for these outfalls: Flow - Report in MGD, TOC - 50 mg/L daily maximum, Oil & Grease - 15 mg/L daily maximum, and pH - 6.0 to 9.0. The limitations and monitoring requirements become effective upon start up of discharge.

#### IX. Permit Limit Rationale:

The following section sets forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. Also set forth are any calculations or other explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under LAC 33:IX.2707/40 CFR Part 122.44 and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed.

##### A. TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Following regulations promulgated at LAC 33:IX.2707.L.2.b/40 CFR Part 122.44(l)(2)(ii), the draft permit limits are based on either technology-based effluent limits pursuant to LAC 33:IX.2707.A/40 CFR Part 122.44(a) or on State water quality standards and requirements pursuant to LAC 33:IX.2707.D/40 CFR Part 122.44(d), whichever are more stringent.

##### B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Regulations promulgated at LAC 33:IX.2707.A/40 CFR Part 122.44(a) require technology-based effluent limitations to be placed in LPDES permits based on effluent limitations guidelines where applicable, on BPJ (best professional judgment) in the absence of guidelines, or on a combination of the two. The following is a rationale for types of wastewaters. See outfall information descriptions for associated outfall(s) in Section VII.

##### 1. Outfall 001, 101, 201, 301, and 401 - Process & Utility Wastewaters

**\*Outfall 001 (Pre-GME)** - the discharge of treated process wastewater and process area stormwater to the Mississippi River. It is comprised of the combined effluents from Internal Outfalls 101 (WWTP effluent), 201 (river water clarifier underflow from the existing refinery), and 301 via Internal Outfall 101 (utility wastewaters, process area stormwater, and effluents from the neighboring facility, Pinnacle).

**\*Outfall 001 (Post-GME)** - the discharge of treated process wastewater and process area stormwater to the Mississippi River. It is comprised of the combined effluents from Internal Outfalls 101 (WWTP effluent), 201 (river water clarifier underflow from the existing refinery), 301 via Internal Outfall 101 (utility wastewaters, process area stormwater, and effluents from the neighboring facility, Pinnacle), and 401 (river water clarifier underflow from the GME project).

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The following monitoring requirements have been placed on this outfall:

| <u>PARAMETER</u>    | <u>MONTHLY AVERAGE<br/>LBS/DAY</u> | <u>DAILY MAXIMUM<br/>LBS/DAY</u> |
|---------------------|------------------------------------|----------------------------------|
| Flow                | Report                             | Report                           |
| pH (standard units) | 6.0                                | 9.0                              |

**Site-Specific Consideration(s) for Outfall 001**

Flow - established in accordance with LAC 33:IX.2707.I.1.b. This requirement has been retained from the LPDES Permit, effective on January 1, 2005.

PH - established in accordance with LAC 33:IX.1113.C.1.

**\*Internal Outfall 101 (Pre-GME)** - the discharge of treated effluent from the WWTP commingled with the treated effluent from the FCCU Scrubber Pond. WWTP influent includes: process wastewater, process area and marine dock stormwater runoff, spent caustic, treated sanitary wastewater, boiler regeneration wastewater, boiler blowdown, ballast water, laboratory wastewater, cooling tower blowdown, fire training water, adjacent MPC distribution terminal air-stripped wastewater/stormwater, miscellaneous de minimus wastewaters (i.e. hydrostatic test wastewaters, air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water), and effluent from Internal Outfall 301.

Marathon Petroleum Company LLC - Louisiana Refining Division, Garyville Refinery is subject to Best Practicable Control Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitation guidelines listed below:

Manufacturing Operation

Refinery

Organic Chemical Manufacturing

Guideline

40 CFR 419

40 CFR 414, Subparts D and J

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The proposed limitations for Internal Outfall 101 (Pre-GME) are as follows:

| Parameters          | Limitations Proposed (Pre-GME)   |                               |
|---------------------|--|-------------------------------|
|                     | Based on a Production rate of 275,000 barrels per day (BCT/BAT) + Revised Internal Outfall 301 Limitations (*) |                               |
|                     | Monthly Average lbs/day  | Daily Maximum lbs/day         |
| Flow                | Report   | Report (continuous recording) |
| pH (standard units) | 6.0  | 9.0 (continuous recording)    |
| BOD <sub>5</sub>    | 2859 (*)   | 5169 (*)                      |
| TSS                 | 2308 (*)   | 3680 (*)                      |
| Oil & Grease        | 837 (*)  | 1567 (*)                      |
| COD                 | 19908 (*)  | 38457 (*)                     |
| Ammonia (as N)      | 1501   | 3301                          |
| Sulfide (as S)      | 14.5   | 32.5                          |
| Phenolic Compounds  | 18.5   | 37.9                          |
| Total Chromium      | 28.3   | 76.6                          |
| Chromium (+6)       | 2.4  | 5.3                           |

(\*)a portion of the allocation comes from Internal Outfall 301 (See Site-Specific Considerations section below.)

Calculations and basis of permit limitations are found at Appendix A-1, A-6 (for Outfall 301 contributions), and associated appendices. See below for site-specific considerations.

**Site-Specific Consideration(s) for Internal Outfall 101 (Pre-GME)**

Flow - established in accordance with LAC 33:IX.2707.I.1.b. Flow shall be monitored continuously. This requirement has been retained from the LPDES Permit, effective on January 1, 2005.

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PH - established in accordance with LAC 33:IX.1113.C.1. Ph shall be monitored continuously. This requirement has been retained from the LPDES Permit, effective on January 1, 2005.

Ammonia (as N), Sulfide (as S), Total Phenolic Compounds, Total Chromium, and Chromium (6+) - limits have been established in accordance with the Refinery Guidelines at 40 CFR 419, based on the increase in production from 255 K bbl/day in the January 1, 2005 permit to 275 K bbl/day.

BOD<sub>5</sub> and TSS - limits have been established in accordance with the Refinery Guidelines at 40 CFR 419, based on the increase in production from 255 K bbl/day in the January 1, 2005 permit to 275 K bbl/day. Outfall 101 also receives a BPJ allocation for both BOD<sub>5</sub> and TSS from Outfall 301. These BPJ mass limitations for BOD<sub>5</sub> and TSS have been incrementally added to the existing BOD and TSS limitations at Internal Outfall 101.

Oil & Grease and COD - limits have been established in accordance with the Refinery Guidelines at 40 CFR 419, based on the increase in production from 255 K bbl/day in the January 1, 2005 permit to 275 K bbl/day. Outfall 101 also receives a BPJ allocation for both COD and Oil & Grease from Outfall 301. These BPJ mass limitations for COD and Oil & Grease have been incrementally added to the existing COD and Oil & Grease limitations at Internal Outfall 101.

**\*Internal Outfall 101 (Post-GME)** - the discharge of treated effluent from the WWTP commingled with the treated effluent from the FCCU Scrubber Pond. WWTP influent includes: process wastewater, process area and marine dock stormwater runoff, spent caustic, treated sanitary wastewater, boiler regeneration wastewater, boiler blowdown, ballast water, laboratory wastewater, cooling tower blowdown, fire training water, adjacent MPC distribution terminal air-stripped wastewater/stormwater, miscellaneous de minimus wastewaters (i.e. hydrostatic test wastewaters, air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water), and effluent from Internal Outfall 301.

Marathon Petroleum Company LLC - Louisiana Refining Division, Garyville Refinery is subject to Best Practicable Control Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitation guidelines listed below:

| <u>Manufacturing Operation</u> | <u>Guideline</u>             |
|--------------------------------|------------------------------|
| Refinery                       | 40 CFR 419, Subpart B        |
| Organic Chemical Manufacturing | 40 CFR 414, Subparts D and J |

Treated effluent from the Garyville Major Expansion (GME) operations is subject to New Source Performance Standard (NSPS) effluent limitation guidelines at 40 CFR 419, Subpart B.

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The proposed limitations for Internal Outfall 101 (Post-GME) are as follows:

| Parameters          | Limitations Proposed   |                               |
|---------------------|--|-------------------------------|
|                     | Based on a Production rate of 275,000 barrels per day (BCT/BAT) + Revised Internal Outfall 301 Limitations (*) + a BPJ Allocation for 185,000 barrels per day (NSPS) |                               |
|                     | Monthly Average lbs/day  | Daily Maximum lbs/day         |
| Flow                | Report   | Report (continuous recording) |
| pH (standard units) | 6.0  | 9.0 (continuous recording)    |
| BOD <sub>5</sub>    | 2909 (*)   | 5284 (*)                      |
| TSS                 | 2374 (*)   | 3867 (*)                      |
| Oil & Grease        | 856 (*)  | 1597 (*)                      |
| COD                 | 20148 (*)  | 38983 (*)                     |
| Ammonia (as N)      | 1521   | 3346                          |
| Sulfide (as S)      | 14.7   | 33.0                          |
| Phenolic Compounds  | 18.6   | 38.2                          |
| Total Chromium      | 28.3   | 76.6                          |
| Chromium (+6)       | 2.4  | 5.3                           |

Calculations and basis of permit limitations are found at Appendix A-2, A-4, A-6 (for Outfall 301 contributions), and associated appendices. See below for site-specific considerations.

**Site-Specific Consideration(s) for Internal Outfall 101 (Post-GME)**

Marathon is in the process of building additional units for the Garyville Major Expansion [GME] Project which is expected to increase production an additional 185,000 K bbl/day for a total production of 460 K bbl/day.

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Marathon requested retention of limits from the January 1, 2005 LPDES permit. While Marathon has committed to retention of Internal Outfall 101 limitations at the level they were permitted for in the 2005 LPDES permit (255,000 bbl/day), this approach did not take into account the reduced contribution from Pinnacle's OCPSF discharge (the point of compliance for the conventional and non-conventional parameters is at Internal Outfall 101). Based on the decrease in Pinnacle's allocation, and keeping with the intent of retaining limitations at Internal Outfall 101, LDEQ has determined that it is more appropriate to establish limitations based on current facility operation of 275,000 bbl/day (**Pre-GME**, using BCT and BAT technologies for the existing process units), the reduced contribution from Pinnacle, and a minimal contribution from the GME project (**Post-GME**, using New Source Performance Standards [NSPS] for the new units). This approach yields no significant net increase in permit limitations at Internal Outfall 101.

LAC 33:IX.2707.L.1 states:

"Except as provided in LAC 33:IX.2707.L.2 when a permit is renewed or reissued, interim limitations, standards or conditions must be at least as stringent as the final limitations, standards, or conditions in the previous permit **(unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under LAC 33:IX.2903) [emphasis added]."**

This citation is the basis for the LDEQ's "anti-backsliding" policy. The highlighted text in the quote above is directly applicable with respect to the assignment of effluent limitations to treated process wastewater and process area stormwater generated as the result the operation of new GME units. As stated above, effluent limitations based upon the NSPS effluent guidelines can be assigned, unless more stringent limitations are warranted if application of the technology-based effluent guidelines would result in a violation of a water quality standard under Section 303 of the CWA applicable to such waters (see LAC 33:IX 2707.L.2.b).

Application of the guidelines at 40 CFR 419, Subpart B would result in assignment of new effluent limitations.

Flow - established in accordance with LAC 33:IX.2707.1.1.b. Flow shall be monitored continuously. This requirement has been retained from the LPDES Permit, effective on January 1, 2005.



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PH - established in accordance with LAC 33:IX.1113.C.1. Ph shall be monitored continuously. This requirement has been retained from the LPDES Permit, effective on January 1, 2005.

Ammonia (as N), Sulfide (as S), and Total Phenolic Compounds- limits have been established in accordance with the Refinery Guidelines at 40 CFR 419, based on the increase in production from 255 K bbl/day in the January 1, 2005 permit to 275 K bbl/day. A small portion of the limitations for the additional 185 K bbl/day (calculated using 40 CFR 419, Subpart B NSPS) has also been applied.

Total Chromium and Chromium (6+) - limits have been established in accordance with the Refinery Guidelines at 40 CFR 419, based on the increase in production from 255 K bbl/day in the January 1, 2005 permit to 275 K bbl/day. No NSPS allocation was granted for these parameters.

BOD<sub>5</sub> and TSS - limits have been established in accordance with the Refinery Guidelines at 40 CFR 419, based on the increase in production from 255 K bbl/day in the January 1, 2005 permit to 275 K bbl/day. A small portion of the limitations for the additional 185 K bbl/day (calculated using 40 CFR 419, Subpart B NSPS) has also been applied. In addition to the refinery discharges, Internal Outfall 101 also receives a BPJ allocation for both BOD<sub>5</sub> and TSS from Internal Outfall 301. These BPJ mass limitations for BOD<sub>5</sub> and TSS have been incrementally added to the existing BOD<sub>5</sub> and TSS limitations at Internal Outfall 101.

Oil & Grease and COD - limits have been established in accordance with the Refinery Guidelines at 40 CFR 419, based on the increase in production from 255 K bbl/day in the January 1, 2005 permit to 275 K bbl/day. A small portion of the limitations for the additional 185 K bbl/day (calculated using 40 CFR 419, Subpart B NSPS) has also been applied. In addition to the refinery discharges, Internal Outfall 101 also receives a BPJ allocation for both COD and Oil & Grease from Internal Outfall 301. These BPJ mass limitations for COD and Oil & Grease have been incrementally added to the existing COD and Oil & Grease limitations at Internal Outfall 101.

See chart below for a comparison of the limitations established in the 2005 LPDES permit, proposed limitations for Pre-GME, the projected increase should LDEQ apply the full NSPS allocation for the additional 185 K bbl/day, and LDEQ's proposed limitations Post-GME:

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| Parameters            | 2005 LPDES Permit  |                             | <u>Limitations Proposed<br/>Current Operations<br/>Pre-GME</u>   |                             | Increase in Production<br>Post-GME<br><br>(Limitations Marathon is<br>entitled to receive per<br>regulations)  |                             | <u>Limitations Proposed<br/>Post-GME</u>   |                             |
|-----------------------|--|-----------------------------|--|-----------------------------|--|-----------------------------|--|-----------------------------|
|                       | Based on a Production<br>rate of 255,000 barrels<br>per day (BCT/BAT) +<br>Internal Outfall 301<br>Limitations (*) |                             | Based on a Production<br>rate of 275,000 barrels<br>per day (BCT/BAT) +<br>Revised Internal Outfall<br>301 Limitations (*) |                             | Based on a Production rate<br>of 275,000 barrels per day<br>(BCT/BAT) + Revised<br>Internal Outfall 301<br>Limitations (*) +<br>Production rate of 185,000<br>barrels per day (NSPS) |                             | Based on a Production rate<br>of 275,000 barrels per day<br>(BCT/BAT) + Revised<br>Internal Outfall 301<br>Limitations (*) + a BPJ<br>Allocation for 185,000<br>barrels per day (NSPS) |                             |
|                       | Monthly<br>Average<br>lbs/day  | Daily<br>Maximum<br>lbs/day | Monthly<br>Average<br>lbs/day  | Daily<br>Maximum<br>lbs/day | Monthly<br>Average<br>lbs/day  | Daily<br>Maximum<br>lbs/day | Monthly<br>Average<br>lbs/day  | Daily<br>Maximum<br>lbs/day |
| Flow (MGD)            | Report,<br>Cont.<br>Monitor  | Report,<br>Cont.<br>Monitor | Report,<br>Cont.<br>Monitor  | Report,<br>Cont.<br>Monitor | Report,<br>Cont.<br>Monitor  | Report,<br>Cont.<br>Monitor | Report,<br>Cont.<br>Monitor  | Report,<br>Cont.<br>Monitor |
| pH, s.u.              | 6.0,<br>Cont.<br>Monitor   | 9.0,<br>Cont.<br>Monitor    | 6.0,<br>Cont.<br>Monitor   | 9.0,<br>Cont.<br>Monitor    | 6.0,<br>Cont.<br>Monitor   | 9.0,<br>Cont.<br>Monitor    | 6.0,<br>Cont.<br>Monitor   | 9.0,<br>Cont.<br>Monitor    |
| BOD <sub>5</sub>      | 2909 (*)   | 5284 (*)                    | 2859 (*)   | 5169 (*)                    | 3800 (*)   | 6927 (*)                    | 2909 (*)   | 5284 (*)                    |
| TSS                   | 2374 (*)   | 3867 (*)                    | 2308 (*)   | 3680 (*)                    | 3067 (*)   | 4893 (*)                    | 2374 (*)   | 3867 (*)                    |
| Oil & Grease          | 856 (*)  | 1597 (*)                    | 837 (*)  | 1567 (*)                    | 1120 (*)   | 2086 (*)                    | 856 (*)  | 1597 (*)                    |
| COD                   | 20148(*)   | 38983 (*)                   | 19908 (*)  | 38457 (*)                   | 26314 (*)  | 51121 (*)                   | 20148 (*)  | 38983 (*)                   |
| Ammonia<br>(as N)     | 1521   | 3346                        | 1501   | 3301                        | 2354   | 5178                        | 1521   | 3346                        |
| Sulfide<br>(as S)     | 14.7   | 33.0                        | 14.5   | 32.5                        | 19.34  | 43.03                       | 14.7   | 33.0                        |
| Phenolic<br>Compounds | 18.6   | 38.2                        | 18.5   | 37.9                        | 24.45  | 50.53                       | 18.6   | 38.2                        |
| Total<br>Chromium     | 23.6   | 68.0                        | 28.3   | 76.6                        | 42.60  | 101.62                      | 28.3   | 76.6                        |
| Chromium<br>(+6)      | 2.0  | 4.4                         | 2.4  | 5.3                         | 3.31   | 7.44                        | 2.4  | 5.3                         |

(\*) These limitations include an allocation from Internal Outfall 301

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**\*Internal Outfall 201 (Pre and Post-GME)** - the discharge through Final Outfall 001 of the underflow stream from the existing refinery's raw river water intake clarification system.

Utility wastewaters receive BPL limitations/monitoring requirements according to the following schedule:

| <b><u>PARAMETER</u></b> | <b><u>MONTHLY AVERAGE<br/>LBS/DAY</u></b> | <b><u>DAILY MAXIMUM<br/>LBS/DAY</u></b> |
|-------------------------|---|---|
| Flow                    | Report                                    | Report                                  |
| Coagulants              | ---                                       | Inventory<br>Calculation(*)             |

(\*) No DMR reporting required. However, records shall be retained for three years, in accordance to Part III.C.3

**Site-Specific Consideration(s) for Internal Outfall 201**

Flow - established in accordance with LAC 33:IX.2707.I.1.b. This requirement has been retained from the LPDES Permit, effective on January 1, 2005.

Coagulants - inventory calculation requirement has been retained from the LPDES Permit, effective on January 1, 2005.

**\*Internal Outfall 301 (Pre and Post-GME)** - the discharge of washdown water, cooling tower blowdown, process area stormwater, and treated sanitary wastewater from Pinnacle. Also included are Pinnacle's miscellaneous de minimus wastewaters (i.e. hydrostatic test wastewaters, air conditioning condensate, steam trap condensate, eye wash and safety shower station water, fire water, and utility water used for general facility washdown water, irrigation water, and dust control water as needed).

Marathon Petroleum Company LLC, Garyville Refinery is subject to Best Practicable Control Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitation guidelines listed below:

|                                       |                                |
|---------------------------------------|--------------------------------|
| <b><u>Manufacturing Operation</u></b> | <b><u>Guideline</u></b>        |
| Organic Chemical Manufacturing        | 40 CFR 414, Subpart(s) D and J |

| <b><u>PARAMETER</u></b> | <b><u>MONTHLY AVERAGE<br/>LBS/DAY</u></b> | <b><u>DAILY MAXIMUM<br/>LBS/DAY</u></b> |
|-------------------------|---|---|
| Flow                    | Report                                    | Report<br>(continuous recording)        |
| BOD <sub>5</sub>        | 22(*)                                     | 59(*)                                   |
| TSS                     | 37(*)                                     | 120(*)                                  |

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| <b><u>PARAMETER</u></b>    | <b><u>MONTHLY AVERAGE<br/>LBS/DAY</u></b> | <b><u>DAILY MAXIMUM<br/>LBS/DAY</u></b> |
|----------------------------|---|---|
| Oil & Grease               | 11(*)                                     | 16(*)                                   |
| COD                        | 74(*)                                     | 196(*)                                  |
| Acrylonitrile              | 0.08                                      | 0.20                                    |
| Benzene                    | 0.05                                      | 0.12                                    |
| Carbon Tetrachloride       | 0.12                                      | 0.33                                    |
| Chlorobenzene              | 0.12                                      | 0.33                                    |
| Chloroethane               | 0.10                                      | 0.26                                    |
| Chloroform                 | 0.10                                      | 0.28                                    |
| 1,1-Dichloroethane         | 0.02                                      | 0.05                                    |
| 1,2-Dichloroethane         | 0.16                                      | 0.50                                    |
| 1,1-Dichloroethylene       | 0.02                                      | 0.05                                    |
| 1,2-trans-Dichloroethylene | 0.02                                      | 0.06                                    |
| 1,2-Dichloropropane        | 0.17                                      | 0.70                                    |
| 1,3-Dichloropropylene      | 0.17                                      | 0.70                                    |
| Ethylbenzene               | 0.12                                      | 0.33                                    |
| Methyl Chloride            | 0.10                                      | 0.26                                    |
| Methylene Chloride         | 0.03                                      | 0.15                                    |
| Tetrachloroethylene        | 0.05                                      | 0.14                                    |
| Toluene                    | 0.02                                      | 0.06                                    |
| 1,1,1-Trichloroethane      | 0.02                                      | 0.05                                    |
| 1,1,2-Trichloroethane      | 0.03                                      | 0.11                                    |
| Trichloroethylene          | 0.02                                      | 0.06                                    |
| Vinyl Chloride             | 0.08                                      | 0.15                                    |
| 2,4-Dimethylphenol         | 0.02                                      | 0.04                                    |
| 4,6-Dinitro-o-cresol       | 0.07                                      | 0.24                                    |
| 2,4-Dinitrophenol          | 1.06                                      | 3.76                                    |

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| <b>PARAMETER</b>           | <b>MONTHLY AVERAGE<br/>LBS/DAY</b> | <b>DAILY MAXIMUM<br/>LBS/DAY</b> |
|----------------------------|------------------------------------|----------------------------------|
| 2-Nitrophenol              | 0.06                               | 0.20                             |
| 4-Nitrophenol              | 0.14                               | 0.50                             |
| Phenol                     | 0.02                               | 0.04                             |
| Acenaphthene               | 0.02                               | 0.04                             |
| Acenaphthylene             | 0.02                               | 0.04                             |
| Anthracene                 | 0.02                               | 0.04                             |
| Benzo (a) anthracene       | 0.02                               | 0.04                             |
| Benzo (a) pyrene           | 0.02                               | 0.04                             |
| 3,4-Benzofluoranthene      | 0.02                               | 0.04                             |
| Benzo(k)fluoranthene       | 0.02                               | 0.04                             |
| Bis(2-ethylhexyl)phthalate | 0.08                               | 0.23                             |
| Chrysene                   | 0.02                               | 0.04                             |
| 1,2-Dichlorobenzene        | 0.17                               | 0.70                             |
| 1,3-Dichlorobenzene        | 0.12                               | 0.33                             |
| 1,4-Dichlorobenzene        | 0.12                               | 0.33                             |
| Diethyl phthalate          | 0.04                               | 0.10                             |
| Dimethyl phthalate         | 0.02                               | 0.04                             |
| Di-n-butyl phthalate       | 0.02                               | 0.04                             |
| Fluoranthene               | 0.02                               | 0.05                             |
| Fluorene                   | 0.02                               | 0.04                             |
| Hexachlorobenzene          | 0.17                               | 0.70                             |
| Hexachlorobutadiene        | 0.12                               | 0.33                             |
| Hexachloroethane           | 0.17                               | 0.70                             |
| Naphthalene                | 0.02                               | 0.04                             |
| Nitrobenzene               | 1.96                               | 5.61                             |
| Phenanthrene               | 0.02                               | 0.04                             |

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| <b><u>PARAMETER</u></b> | <b><u>MONTHLY AVERAGE<br/>LBS/DAY</u></b> | <b><u>DAILY MAXIMUM<br/>LBS/DAY</u></b> |
|-------------------------|---|---|
| Pyrene                  | 0.02                                      | 0.04                                    |
| 1,2,4-Trichlorobenzene  | 0.17                                      | 0.70                                    |

(\*) These limitations are applied at Internal Outfall 101, after further treatment to the wastewater.

Calculations and basis of permit limitations are found at Appendix A-5 and associated appendices. See below for site-specific considerations.

#### **Site-Specific Consideration(s) for Internal Outfall 301**

Internal Outfall 301 has been established for monitoring the facility's commingled OCPSF-regulated waste streams prior to treatment at Marathon's wastewater treatment plant. Mass limitations for the priority pollutants regulated under 40 CFR 414 Subpart J are applied at Internal Outfall 301. Conventional and Non-Conventional parameters (BOD<sub>5</sub>, TSS, Oil & Grease, and COD) are applied after further treatment, at Internal Outfall 101.

Flow - established in accordance with LAC 33:IX.2707.I.1.b. This requirement has been retained from the current LPDES permit, effective on January 1, 2005.

PH - limitations and monitoring requirements will not be applied at Internal Outfall 301 since these discharges are routed through Internal Outfall 101 where pH limitations already exist. This requirement has been retained from the current LPDES permit, effective on January 1, 2005.

BOD<sub>5</sub> and TSS - Limitations were calculated in accordance with the OCPSF Guidelines at 40 CFR 414 based on a flow of 0.128 MGD (0.105 MGD is process wastewater). Internal Outfall 101 Mass limitations for BOD<sub>5</sub> and TSS have been incrementally added to the existing BOD<sub>5</sub> and TSS limitations at Internal Outfall 101. This methodology has been retained from the current LPDES permit, effective on January 1, 2005.

Oil & Grease - BPJ allocations of 10 mg/L and 15 mg/L Daily Average and Daily Maximum, respectively, were applied to this wastestream. This BPJ allowance is appropriate due to the presence of this parameter at the treatment outfall, Internal Outfall 101. The BPJ allocation of 10/15 is an established BPJ allocation methodology for OCPSF waste streams. BPJ mass limitations for Oil and Grease have been incrementally added to the existing Oil and Grease limitations at Internal Outfall 101. This methodology has been retained from the current LPDES permit, effective on January 1, 2005.

COD- BPJ allocations were applied to this wastestream. This BPJ allowance is appropriate due to the presence of this parameter at the treatment outfall, Internal Outfall 101. The BPJ allocation for COD is based on a COD:BOD ratio approach. Based on estimated effluent values submitted in the permit application, a COD:BOD

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ratio of 3.3:1 is established for both Daily Average and Daily Maximum limitations. BPJ mass limitations for COD have been incrementally added to the existing COD limitations at Internal Outfall 101. This methodology has been retained from the current LPDES permit, effective on January 1, 2005.

Acrylonitrile, Benzene, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Ethylbenzene, Methyl Chloride, Methylene Chloride, Tetrachloroethylene, Toluene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, 2,4-Dimethylphenol, 4,6-Dinitro-o-cresol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Phenol, Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) pyrene, 3,4-Benzofluoranthene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Fluoranthene, Fluorene, Hexachlorobenzene, Hexachlorobutadiene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, 1,2,4-Trichlorobenzene - limitations established in accordance with OCPSF Guidelines under 40 CFR 414, Subparts D and J for the Thermoplastic Resins Subcategory based on a flow of 0.128 MGD (0.105 MGD is process wastewater).

**\*Internal Outfall 401 (new outfall proposed to discharge Post-GME)** - the discharge through Final Outfall 001 of the underflow stream from the new raw river water intake clarification system from the Post-GME Project.

Utility wastewaters receive BPJ limitations/monitoring requirements according to the following schedule:

| <u>PARAMETER</u> | <u>MONTHLY AVERAGE<br/>LBS/DAY</u> | <u>DAILY MAXIMUM<br/>LBS/DAY</u> |
|------------------|------------------------------------|----------------------------------|
| Flow             | Report                             | Report                           |
| Coagulants       | ---                                | Inventory<br>Calculation(*)      |

(\*) No DMR reporting required. However, records shall be retained for three years, in accordance to Part III.C.3

**Site-Specific Consideration(s) for Internal Outfall 401**

Flow - established in accordance with LAC 33:IX.2707.1.1.b. This outfall is identical in nature to the existing Internal Outfall 201, therefore the same requirements have applied based on Best Professional Judgment (BPJ).

Coagulants - an inventory calculation requirement has been established. This outfall is identical in nature to the existing Internal Outfall 201, therefore the same requirements have applied based on Best Professional Judgment (BPJ).

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2. Outfalls 002, 003, 004, 04A, 04B, 005, 006, 007, 07A, 008, 08A, 08B, 009, 012, and 013 - Commingled Utility Wastewaters & Stormwater Runoff

**\*Outfall 002 (Pre and Post-GME)** - the discharge of non-process area stormwater runoff from the entire tank farm (except two refrigerated butane storage tanks [RBS]) including the diked secondary containment areas, the stormwater and underdrain groundwater from the certified closed land treatment area, the sandblasting and painting area located to the west of the certified closed land treatment area, material transfer areas other than the docks, stormwater that falls within close proximity to the paved, curbed process areas such as roadways, ditches, grassy areas, and gravel/aggregate surfaced areas, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously monitored hydrostatic test wastewater from Internal Outfall 011.

**\*Outfall 003 (Pre and Post-GME)** - the discharge of non-process area stormwater runoff from Marathon Avenue, the refinery warehouse area, contractor laydown area, and employee and contractor parking areas, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown, and as needed, irrigation and dust control water), and previously monitored hydrostatic test wastewater from Internal Outfall 011.

**\*Outfalls 004, 04A, and 04B (Pre and Post-GME)** - the discharge of nonprocess area stormwater runoff from contractor laydown area and contractor parking areas, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.

**\*Outfalls 005 and 006 (Pre and Post-GME)** - the discharge of nonprocess area stormwater runoff from contractor laydown area and contractor parking areas, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.

**\*Outfall 007 (Pre-GME)** - the discharge of nonprocess area stormwater runoff from the western-most RBS tank diked containment area and the secondary containment around the bulk non-hazardous waste storage area, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.



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**\*Outfall 007 (Post-GME)** - the discharge of nonprocess area stormwater runoff from the western-most RBS tank diked containment area, the secondary containment around the bulk non-hazardous waste storage area south of the RBS, former Outfall 07A which includes stormwater runoff from the eastern-most RBS tank diked containment area, and former Outfall 08B which includes nonprocess area stormwater runoff from the shell aggregate service road and containment dike outslope and grassed area west of the solid waste transfer area; miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water); and previously tested hydrostatic test discharges from Internal Outfall 011.

**\*Outfall 07A (Pre-GME, this outfall is proposed for deletion Post-GME)** - the discharge of nonprocess area stormwater runoff from the eastern-most RBS tank diked containment area, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.

**\*Outfalls 008 and 08A (Pre and Post-GME)** - the discharge of nonprocess area stormwater runoff from the shell aggregate service road and containment dike outslope and grassed area west of the solid waste transfer area, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.

**\*Outfall 08B (Pre-GME only, this Outfall is proposed for deletion Post-GME)** - Type of wastewater - the discharge of nonprocess area stormwater runoff from the shell aggregate service road and containment dike outslope and grassed area west of the solid waste transfer area, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.

**\*Outfall 009 (Pre and Post-GME)** - the discharge of non-process area stormwater runoff from the coker conveyor belt area and the contractor laydown areas located on the western side of the refinery's main tank farm, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.

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Utility wastewaters and stormwater runoff being discharged to discrete outfalls receive BPJ limitations/monitoring requirements according to the following schedule:

| <b><u>PARAMETER</u></b> | <b><u>MONTHLY AVERAGE<br/>MG/L</u></b> | <b><u>DAILY MAXIMUM<br/>MG/L</u></b> |
|-------------------------|--|--------------------------------------|
| Flow, MGD               | Report                                 | Report                               |
| TOC                     | ---                                    | 50                                   |
| Oil & Grease            | ---                                    | 15                                   |
| pH Standard Units       | 6.0 (min)                              | 9.0 (max)                            |

**Site-Specific Consideration(s) for Outfalls 002, 003, 004, 04A, 04B, 005, 006, 007, 07A, 008, 08A, 08B, 009 (Pre and Post-GME)**

Flow - established in accordance with LAC 33:IX.2707.I.1.b. This requirement has been retained from the current LPDES permit, effective on January 1, 2005.

PH - established in accordance with LAC 33:IX.1113.C.1. This requirement has been retained from the current LPDES permit, effective on January 1, 2005.

TOC and Oil & Grease - These limitations were retained from the current LPDES permit, effective on January 1, 2005 and have been applied based on BPJ in accordance with this Office's guidance on stormwater, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6) and similarly permitted discharges.

Marathon Petroleum Company LLC has identified the following outfalls discharging substantially identical effluents, based on similarities of the industrial activities, significant materials or storm water management practices occurring within the outfall drainage areas:

Outfall 004 is representative of Outfalls 04A & 04B.

Outfall 005 is representative of Outfall 006.

Outfall 007 is representative of Outfall 07A (until outfall deletion).

Outfall 008 is representative of Outfalls 08A & 08B (until Outfall 08B deletion).

Outfall 008 is representative of Outfall 08A (after Outfall 08B deletion)

Marathon Petroleum Company LLC may test the effluent of just one of the outfalls (the designated representative outfall) and report that the quantitative data also applies to the substantially identical outfall(s). For this to be permissible, Marathon Petroleum Company LLC must include the following information in the facility's stormwater pollution prevention plan: locations of the outfalls; why the outfalls are expected to discharge substantially identical effluents; estimates of the size of the

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drainage area (in square feet) for each of the outfalls; and an estimate of the runoff coefficient of the drainage areas (low: under 40 percent; medium: 40 to 65 percent; high: above 65 percent). This requirement has been retained from the January 1, 2005 LPDES Permit.

**\*Outfall 012 (new outfall proposed Post-GME)** - the discharge of nonprocess area stormwater runoff that falls within close proximity to the paved, curbed process areas such as roadways, ditches, grassy areas, gravel/aggregate surfaced areas associated with the GME Project on the east side of Marathon Avenue, the shell aggregate service road on the eastern side of the refinery's main tank farm (formerly Outfall 010), miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.

**\*Outfall 013 (new outfall proposed Post-GME)** - the discharge of non-process area stormwater runoff from the future employee parking area on the east side of the GME, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.

Utility wastewaters and stormwater runoff being discharged to discrete outfalls receive BPJ limitations/monitoring requirements according to the following schedule:

| <u>PARAMETER</u>  | <u>MONTHLY AVERAGE</u><br><u>MG/L</u> | <u>DAILY MAXIMUM</u><br><u>MG/L</u> |
|-------------------|---------------------------------------|-------------------------------------|
| Flow, MGD         | Report                                | Report                              |
| TOC               | ---                                   | 50                                  |
| Oil & Grease      | ---                                   | 15                                  |
| pH Standard Units | 6.0 (min)                             | 9.0 (max)                           |

**Site-Specific Consideration(s) for Outfalls 012 and 013 (Post-GME only)**

Flow - established in accordance with LAC 33:IX.2707.I.1.b.

PH - established in accordance with LAC 33:IX.1113.C.1.

TOC and Oil & Grease - These limitations have been applied based on BPJ in accordance with this Office's guidance on stormwater, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6) and similarly permitted discharges.

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**General Condition Applicable to all Stormwater Outfalls**

In accordance with LAC 33:IX.2707.1.3 and [40 CFR 122.44(i)(3) and (4)], a Part II condition is proposed for applicability to all storm water discharges from the facility, either through permitted outfalls or through outfalls which are not listed in the permit or as sheet flow. The Part II condition requires a Storm Water Pollution Prevention Plan (SWP3) within six (6) months of the effective date of the final permit, along with other requirements. If the permittee maintains other plans that contain duplicative information, those plans could be incorporated by reference to the SWP3. Examples of these type plans include, but are not limited to: Spill Prevention Control and Countermeasures Plan (SPCC), Best Management Plan (BMP), Response Plans, etc. The conditions will be found in the draft permit. Including Best Management Practice (BMP) controls in the form of a SWP3 is consistent with other LPDES and EPA permits regulating similar discharges of stormwater associated with industrial activity, as defined in LAC 33:IX.2522.B.14 [40 CFR 122.26(b)(14)].

3. Outfall(s) 011 - Hydrostatic Test Water

**\*Outfall 011** - the intermittent discharge of hydrostatic test wastewater.

Hydrostatic test discharges shall receive the following limitations:

| <b><u>PARAMETER</u></b> | <b><u>MONTHLY AVERAGE<br/>(MG/L)</u></b> | <b><u>DAILY MAXIMUM<br/>(MG/L)</u></b> |
|-------------------------|--|--|
| Flow (MGD)              | Report                                   | Report                                 |
| TSS                     | ---                                      | 90                                     |
| Oil & Grease            | ---                                      | 15                                     |
| TOC                     | ---                                      | 50                                     |
| Benzene                 | ---                                      | 50 µg/L                                |
| Total BTEX              | ---                                      | 250 µg/L                               |
| Total Lead              | ---                                      | 50 µg/L                                |

**Site-Specific Consideration(s) for Outfall 011 (Pre and Post-GME)**

Flow - this requirement has been retained from the current LPDES permit, effective on January 1, 2005 and established in accordance with LAC 33:IX.2707.1.1.b.

TSS, Oil & Grease, TOC, Benzene, Total BTEX, and total Lead - These limitations have been retained from the current LPDES permit, effective on January 1, 2005 and applied based on BPJ in accordance with the Hydrostatic Test General Permit (LAG670000) and similarly permitted discharges.

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C. WATER QUALITY-BASED EFFLUENT LIMITATIONS

Technology-based effluent limitations and/or specific analytical results from the permittee's application were screened against state water quality numerical standard based limits by following guidance procedures established in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001. Calculations, results, and documentation are given in Appendix B.

In accordance with LAC 33:IX.2707.D.1/40 CFR § 122.44(d)(1), the existing (or potential) discharge (s) was evaluated in accordance with the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001, to determine whether pollutants would be discharged "at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard." Calculations, results, and documentation are given in Appendix B.

The following pollutants received water quality based effluent limits:

| <b>PARAMETER(S)</b> |
|---------------------|
| None                |

Minimum quantification levels (MQL's) for state water quality numerical standards-based effluent limitations are set at the values listed in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001. They are also listed in Part II of the permit.

**TMDL Waterbodies**

Outfall 001

The discharges from outfall 001 including treated process wastewater and process area stormwater, utility wastewater, treated sanitary wastewater, and non-process area stormwater runoff are to Mississippi River, Segment No. 070301. The Mississippi River is not listed on the 303(d) report as having any impairments. Therefore, no additional requirements were added to this permit as a result of impairments in the Mississippi River.

Outfalls 002, 003, 004, 04A, 04B, 005, 006, 007, 07A, 008, 08A, 08B, 009, 011, 012, and 013

The discharges from Outfalls 002, 003, 004, 04A, 04B, 005, 006, 007, 07A, 008, 08A, 08B, 009, 011, 012, and 013 including stormwater, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water such as facility wash down water, and as needed, irrigation and dust control water), and hydrostatic test wastewaters are to the Lake Maurepas Drainage System (Union Canal, thence to the Mississippi River, thence to Dutch Bayou, thence to Lake Maurepas), Segment No. 040602. This Subsegment is listed on the 303(d) report as being impaired with pathogen indicators and non-native aquatic plants. A TMDL is scheduled to be completed by March 31, 2011. Based on evaluation of the types of effluent discharges, it was determined that the facility does not have the potential to cause

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or contribute to further pathogen indicator and non-native aquatic plant impairments in the receiving water body.

#### Pathogen Indicators

Sanitary wastewaters are usually associated with pathogen indicator impairments. Since these outfalls do not contain sanitary wastewater discharges, LDEQ has determined there is no potential to cause further impairments to the receiving water body. Therefore, no additional requirements were added to this permit as a result of the pathogen indicator impairment.

#### Non-Native Aquatic Plants

Non-native aquatic plants are introduced into a waterbody through discharges such as ship ballast water, where the ballast water originates from a different areas/waterbody. Since these outfalls do not contain this type of wastewater, LDEQ has determined there is no potential to cause further impairments to the receiving water body. Therefore, no additional requirements were added to this permit as a result of the non-native aquatic plant impairment.

Monitoring frequencies for water quality based limited parameters are established in accordance with the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, September 27, 2001.

#### **Site-Specific Consideration(s) for TMDLs**

None

#### **D. Biomonitoring Requirements**

It has been determined that there may be pollutants present in the effluent which may have the potential to cause toxic conditions in the receiving stream. The State of Louisiana has established a narrative criteria which states, "toxic substances shall not be present in quantities that alone or in combination will be toxic to plant or animal life." The Office of Environmental Services requires the use of the most recent EPA biomonitoring protocols.

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates both the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit for Outfall(s) 001 are as follows:

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#### TOXICITY TESTS

#### FREQUENCY

Acute static renewal 48-hour  
 definitive toxicity test  
 using Daphnia pulex

1/year

Acute static renewal 48-hour  
 definitive toxicity test  
 using fathead minnow (Pimephales  
 promelas)

1/year

Toxicity tests shall be performed in accordance with protocols described in the latest revision of the "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms." The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the State water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge in accordance with regulations promulgated at LAC 33:IX.2715/40 CFR Part 122.48.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen, conductivity, and alkalinity shall be documented in a full report according to the test method publication mentioned in the previous paragraph. The permittee shall submit a copy of the first full report to the Office of Environmental Compliance. The full report and subsequent reports are to be retained for three (3) years following the provisions of Part III.C.3 of this permit. The permit requires the submission of certain toxicity testing information as an attachment to the Discharge Monitoring Report.

This permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body. Modification or revocation of the permit is subject to the provisions of LAC 33:IX.3105/40 CFR 124.5. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

#### Dilution Series

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. The following dilution series shall be applied Pre-GME and Post-GME :

##### **Pre-GME**

These additional effluent concentrations shall be 0.05%, 0.06%, 0.08%, 0.11%, and 0.15%. The low-flow effluent concentration (critical dilution) is defined as 0.11% effluent.

##### **Post-GME**

These additional effluent concentrations shall be 0.08%, 0.11%, 0.15%, 0.20%, and 0.27%. The low-flow effluent concentration (critical dilution) is defined as 0.20% effluent.

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E. MONITORING FREQUENCIES

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity [LAC 33:IX.2715/40 CFR 122.48(b)] and to assure compliance with permit limitations [LAC 33:IX.2707.I./40 CFR 122.44(I)]. The following section(s) explain the rationale for the monitoring frequencies stated in the draft permit.

1. Outfall 001, 101, 201, 301, and 401 - Process & Utility Wastewaters

**\*Outfall 001 (Pre-GME)** - the discharge of treated process wastewater and process area stormwater to the Mississippi River. It is comprised of the combined effluents from Internal Outfalls 101 (WWTP effluent), 201 (river water clarifier underflow from the existing refinery), and 301 via Internal Outfall 101 (utility wastewaters, process area stormwater, and effluents from the neighboring facility, Pinnacle).

**\*Outfall 001 (Post-GME)** - the discharge of treated process wastewater and process area stormwater to the Mississippi River. It is comprised of the combined effluents from Internal Outfalls 101 (WWTP effluent), 201 (river water clarifier underflow from the existing refinery), 301 via Internal Outfall 101 (utility wastewaters, process area stormwater, and effluents from the neighboring facility, Pinnacle), and 401 (river water clarifier underflow from the GME project).

The following monitoring requirements have been placed on this outfall:

Flow and pH shall be monitored 1/week. These requirements have been retained from the January 1, 2005 LPDES permit.

| <u>PARAMETER(S)</u> | <u>MONITORING FREQUENCY</u> |
|---------------------|-----------------------------|
| Flow                | 1/week                      |
| pH                  | 1/week                      |

**Site Specific Considerations for Monitoring Frequencies at Outfall 001 (Pre and Post-GME)**

Flow - Marathon shall report the Daily Average and Daily Maximum flows as the arithmetic sum of Internal Outfalls 101 and 201 (Pre-GME) and 101, 201, and 401 (Post-GME).

**\*Internal Outfall 101 (Pre and Post-GME)** - the discharge of treated effluent from the WWTP commingled with the treated effluent from the FCCU Scrubber Pond. WWTP influent includes: process wastewater, process area and marine dock stormwater runoff, spent caustic, treated sanitary wastewater, boiler regeneration wastewater, boiler blowdown, ballast water, laboratory wastewater, cooling tower blowdown, fire training water, adjacent MPC distribution terminal air-stripped wastewater/stormwater, miscellaneous de minimus wastewaters (i.e. hydrostatic test wastewaters, air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water), and effluent



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from Internal Outfall 301.

Flow and pH shall be monitored continuously. These monitoring frequencies have been retained from the current permit, effective on January 1, 2005.

| <b>PARAMETER(S)</b> | <b>MONITORING FREQUENCY</b> |
|---------------------|-----------------------------|
| Flow                | Continuous                  |
| pH                  | Continuous                  |

BOD<sub>5</sub>, TSS, Oil & Grease, COD, Ammonia (as N), Sulfide (as S), and Phenolic Compounds shall be monitored 1/week. A monitoring frequency of 1/week for the following listed pollutants is considered adequate for the protection of the receiving water and its designated uses as stated in Section VI.7. These monitoring frequencies have been retained from the current permit, effective on January 1, 2005.

| <b>PARAMETER(S)</b> | <b>MONITORING FREQUENCY</b> |
|---------------------|-----------------------------|
| BOD <sub>5</sub>    | 1/week                      |
| TSS                 | 1/week                      |
| Oil & Grease        | 1/week                      |
| COD                 | 1/week                      |
| Ammonia (as N)      | 1/week                      |
| Sulfide (as S)      | 1/week                      |
| Phenolic Compounds  | 1/week                      |

Total Chromium, and Chromium (6+) - Marathon does not use or generate Chromium at its facility, therefore a monitoring frequency of 1/year for Total Chromium and Hexavalent Chromium is considered adequate for the protection of the receiving water and its designated uses as stated in Section VI.7. These monitoring frequencies have been retained from the current permit, effective on January 1, 2005.

| <b>PARAMETER(S)</b> | <b>MONITORING FREQUENCY</b> |
|---------------------|-----------------------------|
| Total Chromium      | 1/year                      |
| Chromium (6+)       | 1/year                      |

**Site Specific Considerations for Monitoring Frequencies at Internal Outfall 101 (Pre and Post-GME)**

None

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**\*Internal Outfall 201 (Pre and Post-GME)** - the discharge through Final Outfall 001 of the underflow stream from the existing refinery's raw river water intake clarification system.

Flow is proposed to be monitored 1/week. This frequency has been retained from the January 1, 2005 LPDES permit.

| <b>PARAMETER(S)</b> | <b>MONITORING FREQUENCY</b> |
|---------------------|-----------------------------|
| Flow                | 1/week                      |

**Site Specific Considerations for Monitoring Frequencies at Internal Outfall 201 (Pre and Post-GME)**

None

**\*Internal Outfall 301 (Pre and Post-GME)** - the discharge of washdown water, cooling tower blowdown, process area stormwater, and treated sanitary wastewater from Pinnacle. Also included are Pinnacle's miscellaneous de minimus wastewaters (i.e. hydrostatic test wastewaters, air conditioning condensate, steam trap condensate, eye wash and safety shower station water, fire water, and utility water used for general facility washdown water, irrigation water, and dust control water as needed).

Flow shall be monitored continuously. This monitoring frequency has been retained from the current permit, effective on January 1, 2005.

| <b>PARAMETER(S)</b> | <b>MONITORING FREQUENCY</b> |
|---------------------|-----------------------------|
| Flow                | Continuous                  |

Acrylonitrile, Benzene, Carbon Tetrachloride, Chlorobenzene, Chloroethane, Chloroform, 1,1-Dichloroethane, 1,2-Dichloroethane, 1,1-Dichloroethylene, 1,2-trans-Dichloroethylene, 1,2-Dichloropropane, 1,3-Dichloropropylene, Ethylbenzene, Methyl Chloride, Methylene Chloride, Tetrachloroethylene, Toluene, 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, Trichloroethylene, Vinyl Chloride, 2,4-Dimethylphenol, 4,6-Dinitro-o-Cresol, 2,4-Dinitrophenol, 2-Nitrophenol, 4-Nitrophenol, Phenol, Acenaphthene, Acenaphthylene, Anthracene, Benzo (a) anthracene, Benzo (a) pyrene, 3,4-Benzofluoranthene, Benzo(k)fluoranthene, Bis(2-ethylhexyl)phthalate, Chrysene, 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Diethyl phthalate, Dimethyl phthalate, Di-n-butyl phthalate, Fluoranthene, Fluorene, Hexachlorobenzene, Hexachlorobutadiene, Hexachloroethane, Naphthalene, Nitrobenzene, Phenanthrene, Pyrene, and 1,2,4-Trichlorobenzene - Toxic pollutants not expected to be on-site are proposed to be monitored once per year. These monitoring frequencies were retained from the current LPDES permit, effective on January 1, 2005.

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| PARAMETER(S)               | MONITORING FREQUENCY |
|----------------------------|----------------------|
| Acrylonitrile              | 1/year               |
| Benzene                    | 1/year               |
| Carbon Tetrachloride       | 1/year               |
| Chlorobenzene              | 1/year               |
| Chloroethane               | 1/year               |
| Chloroform                 | 1/year               |
| 1,1-Dichloroethane         | 1/year               |
| 1,2-Dichloroethane         | 1/year               |
| 1,1-Dichloroethylene       | 1/year               |
| 1,2-trans-Dichloroethylene | 1/year               |
| 1,2-Dichloropropane        | 1/year               |
| 1,3-Dichloropropylene      | 1/year               |
| Ethylbenzene               | 1/year               |
| Methyl Chloride            | 1/year               |
| Methylene Chloride         | 1/year               |
| Tetrachloroethylene        | 1/year               |
| Toluene                    | 1/year               |
| 1,1,1-Trichloroethane      | 1/year               |
| 1,1,2-Trichloroethane      | 1/year               |
| Trichloroethylene          | 1/year               |
| Vinyl Chloride             | 1/year               |
| 2,4-Dimethylphenol         | 1/year               |
| 4,6-Dinitro-o-cresol       | 1/year               |
| 2,4-Dinitrophenol          | 1/year               |
| 2-Nitrophenol              | 1/year               |
| 4-Nitrophenol              | 1/year               |
| Phenol                     | 1/year               |
| Acenaphthene               | 1/year               |

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| PARAMETER(S)               | MONITORING FREQUENCY |
|----------------------------|----------------------|
| Acenaphthylene             | 1/year               |
| Anthracene                 | 1/year               |
| Benzo (a) anthracene       | 1/year               |
| Benzo (a) pyrene           | 1/year               |
| 3,4-Benzofluoranthene      | 1/year               |
| Benzo(k)fluoranthene       | 1/year               |
| Bis(2-ethylhexyl)phthalate | 1/year               |
| Chrysene                   | 1/year               |
| 1,2-Dichlorobenzene        | 1/year               |
| 1,3-Dichlorobenzene        | 1/year               |
| 1,4-Dichlorobenzene        | 1/year               |
| Diethyl phthalate          | 1/year               |
| Dimethyl phthalate         | 1/year               |
| Di-n-butyl phthalate       | 1/year               |
| Fluoranthene               | 1/year               |
| Fluorene                   | 1/year               |
| Hexachlorobenzene          | 1/year               |
| Hexachlorobutadiene        | 1/year               |
| Hexachloroethane           | 1/year               |
| Naphthalene                | 1/year               |
| Nitrobenzene               | 1/year               |
| Phenanthrene               | 1/year               |
| Pyrene                     | 1/year               |
| 1,2,4-Trichlorobenzene     | 1/year               |

**Site Specific Considerations for Monitoring Frequencies at Internal Outfall 301 (Pre and Post-GME)**

None

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**\*Internal Outfall 401 (new outfall proposed to discharge Post-GME)** - the discharge through Final Outfall 001 of the underflow stream from the new raw river water intake clarification system from the Post-GME Project.

Flow is proposed to be monitored 1/week. This discharge is identical to the discharge from Internal Outfall 201, therefore, this frequency has been established based on BPJ and similarly permitted outfalls.

| PARAMETER(S) | MONITORING FREQUENCY |
|--------------|----------------------|
| Flow         | 1/week               |

**Site Specific Considerations for Monitoring Frequencies at Internal Outfall 401 (Post-GME only)**

None

- Outfalls 002, 003, 004, 04A, 04B, 005, 006, 007, 07A, 008, 08A, 08B, 009, 012, and 013 - Commingled Utility Wastewaters & Stormwater Runoff

**\*Outfall 002 (Pre and Post-GME)** - the discharge of non-process area stormwater runoff from the entire tank farm (except two refrigerated butane storage tanks [RBS]) including the diked secondary containment areas, the stormwater and underdrain groundwater from the certified closed land treatment area, the sandblasting and painting area located to the west of the certified closed land treatment area, material transfer areas other than the docks, stormwater that falls within close proximity to the paved, curbed process areas such as roadways, ditches, grassy areas, and gravel/aggregate surfaced areas, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously monitored hydrostatic test wastewater from Internal Outfall 011.

**\*Outfall 003 (Pre and Post-GME)** - the discharge of non-process area stormwater runoff from Marathon Avenue, the refinery warehouse area, contractor laydown area, and employee and contractor parking areas, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously monitored hydrostatic test wastewater from Internal Outfall 011.

**\*Outfalls 004, 04A, and 04B (Pre and Post-GME)** - the discharge of nonprocess area stormwater runoff from contractor laydown area and contractor parking areas, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.

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**\*Outfalls 005 and 006 (Pre and Post-GME)** - the discharge of nonprocess area stormwater runoff from contractor laydown area and contractor parking areas, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.

**\*Outfall 007 (Pre-GME)** - the discharge of nonprocess area stormwater runoff from the western-most RBS tank diked containment area and the secondary containment around the bulk non-hazardous waste storage area, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.

**\*Outfall 007 (Post-GME)** - the discharge of nonprocess area stormwater runoff from the western-most RBS tank diked containment area, the secondary containment around the bulk non-hazardous waste storage area south of the RBS, former Outfall 07A which includes stormwater runoff from the eastern-most RBS tank diked containment area, and former Outfall 08B which includes nonprocess area stormwater runoff from the shell aggregate service road and containment dike outslope and grassed area west of the solid waste transfer area; miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water); and previously tested hydrostatic test discharges from Internal Outfall 011.

**\*Outfall 07A (Pre-GME, this outfall is proposed for deletion Post-GME)** - the discharge of nonprocess area stormwater runoff from the eastern-most RBS tank diked containment area, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.

**\*Outfalls 008 and 08A (Pre and Post-GME)** - the discharge of nonprocess area stormwater runoff from the shell aggregate service road and containment dike outslope and grassed area west of the solid waste transfer area, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water such as facility wash down water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.

**\*Outfall 08B (Pre-GME only, this Outfall is proposed for deletion Post-GME)** - Type of wastewater - the discharge of nonprocess area stormwater runoff from the shell aggregate service road and containment dike outslope and grassed area west of the solid waste transfer area, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.

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**\*Outfall 009 (Pre and Post-GME)** - the discharge of non-process area stormwater runoff from the coker conveyor belt area and the contractor laydown areas located on the western side of the refinery's main tank farm, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.

Stormwater and utility wastewater pollutants being discharged to discrete outfalls shall receive monitoring frequencies according to the following schedule:

Flow, TOC, Oil and Grease, and pH - A monitoring frequency of 1/quarter has been retained from the current permit, effective on January 1, 2005. This frequency is consistent with the frequency established for similarly permitted discharges and the LPDES Multi-Sector General Permit (LAR050000), and have been applied based on best professional judgment.

| <b>PARAMETER(S)</b> | <b>MONITORING FREQUENCY</b> |
|---------------------|-----------------------------|
| Flow                | 1/quarter                   |
| TOC                 | 1/quarter                   |
| Oil & Grease        | 1/quarter                   |
| pH                  | 1/quarter                   |

**\*Outfall 012 (new outfall proposed Post-GME)** - the discharge of nonprocess area stormwater runoff that falls within close proximity to the paved, curbed process areas such as roadways, ditches, grassy areas, gravel/aggregate surfaced areas associated with the GME Project on the east side of Marathon Avenue, the shell aggregate service road on the eastern side of the refinery's main tank farm (formerly Outfall 010), miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.

**\*Outfall 013 (new outfall proposed Post-GME)** - the discharge of non-process area stormwater runoff from the future employee parking area on the east side of the GME, miscellaneous de minimus wastewaters (i.e. air conditioning condensate, steam trap condensate, eye wash and safety shower station water, and general facility washdown water, and as needed, irrigation and dust control water), and previously tested hydrostatic test discharges from Internal Outfall 011.

Stormwater and utility wastewater pollutants being discharged to discrete outfalls shall receive monitoring frequencies according to the following schedule:

Flow, TOC, Oil and Grease, and pH - A monitoring frequency of 1/quarter has been established for Outfalls 012 and 013. This frequency is consistent with the frequency established for similarly permitted discharges (Outfalls 002-009), the LPDES Multi-Sector General Permit (LAR050000), and best professional judgment.

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| PARAMETER(S) | MONITORING FREQUENCY |
|--------------|----------------------|
| Flow         | 1/quarter            |
| TOC          | 1/quarter            |
| Oil & Grease | 1/quarter            |
| pH           | 1/quarter            |

**Site Specific Considerations for Monitoring Frequencies at Outfalls 002, 003, 004, 04A, 04B, 005, 006, 007, 07A, 008, 08A, 08B, and 009 (Pre and Post-GME) and Outfalls 012 and 013 (Post-GME only)**

None

3. Outfall 011 - Hydrostatic Test Water

**\*Outfall 011 (Pre and Post-GME)** - the discharge of hydrostatic test wastewater.

Hydrostatic test discharges, being discharged to discrete outfalls receive monitoring frequencies according to the following schedule as per the Hydrostatic Test General Permit, LAG670000:

Flow, TSS, Oil & Grease, TOC, Benzene, Total BTEX, and Total Lead shall be monitored 1/event. These monitoring frequencies have been retained from the current permit, effective on January 1, 2005, and are consistent with the requirements established in the Hydrostatic Test General Permit, LAG670000.

| PARAMETER(S) | MONITORING FREQUENCY |
|--------------|----------------------|
| Flow         | 1/event              |
| TSS          | 1/event              |
| Oil & Grease | 1/event              |
| TOC          | 1/event              |
| Benzene      | 1/event              |
| Total BTEX   | 1/event              |
| Total Lead   | 1/event              |

**Site Specific Considerations for Monitoring Frequencies at Outfall 011 (Pre and Post-GME)**

None



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**X. Compliance History/DMR Review :**

A file review was done covering the period of January 2005 through January 2008. See below for findings.

A. DMR Review - The following exceedance was reported by Marathon:

| DATE     | PARAMETER  | OUTFALL | REPORTED VALUE               | PERMIT LIMITS               |
|----------|------------|---------|------------------------------|-----------------------------|
| 12/31/06 | Total Lead | 011     | 120 $\mu$ g/L, daily maximum | 50 $\mu$ g/L, daily maximum |

B. Inspections - A facility inspection was conducted on December 13, 2007. No items of concern were noted.

C. Compliance History - There were no open enforcement actions for this facility.

**XI. "IT" Questions - Applicant's Responses**

IT Questions and Marathon Petroleum Company LLC's responses are included in Binder 2 of the LPDES permit application for the revocation and reissuance of this permit, received on December 27, 2007. This document may be viewed in LDEQ's Electronic Data Management System (EDMS) under Document ID #36495057.

**XII. Endangered Species:**

Outfall 001

The receiving waterbody, Subsegment 070301 of the Mississippi River Basin, has been identified by the U.S. Fish and Wildlife Service (FWS) as habitat for the Pallid Sturgeon, which are listed as an endangered species.

Outfalls 002, 003, 004, 04A, 04B, 005, 006, 007, 07A, 008, 08A, 08B, 009, 011, 012, and 013

The receiving waterbody, Subsegment 040602 of the Lake Pontchartrain Basin has been identified by the U.S. Fish and Wildlife Service (FWS) as critical habitat for the Gulf Sturgeon, which are listed as an endangered species.

Based on both subsegments containing endangered species, the preliminary draft permit has been submitted to the FWS for review in accordance with a letter dated 10/24/07 from Boggs (FWS) to Brown (LDEQ). As set forth in the Memorandum of Understanding between the LDEQ and the FWS, and after consultation with FWS, LDEQ has determined that the issuance of the LPDES permit is not likely to have an adverse effect upon the Pallid Sturgeon in Subsegment 070301 and/or the Gulf Sturgeon in Subsegment 040602. Effluent limitations are established in the permit to ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. The more stringent of technology and water quality based limits (as applicable) have been applied to ensure maximum protection of the receiving water.

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**XIII. Historic Sites:**

The discharge will be from a proposed facility expansion. LDEQ is currently consulting with the State Historic Preservation Officer (SHPO) to determine whether construction-related activities could potentially affect sites or properties on or eligible for listing on the National Register of Historic Places. Any comments received from SHPO will be addressed prior to final permit issuance.

**XIV. Tentative Determination:**

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to permit for the discharge described in the application.

**XV. Variances:**

No requests for variances have been received by this Office.

**XVI. Public Notices:**

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the fact sheet. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List